

Winter To Drag Out in U.S. Manufacturing Sector

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Highlights

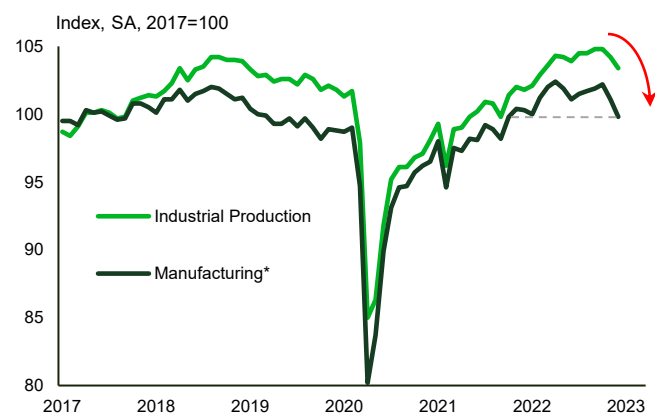
- Several indicators show that the U.S. manufacturing industry is experiencing a downturn. These include recent declines in manufacturing production and weak readings in survey-level data, such as the ISM, where the headline manufacturing index has dropped well into contractionary territory.
- Manufacturing job growth – a lagging but important indicator – has also lost considerable steam in recent months, weighed down by softness in non-durable goods. The East Coast region exhibits a similar trend to the U.S. on this front, but its manufacturing job growth slowdown has been more pronounced. Within the region, however, the Lower South Atlantic is holding up better, thanks in part to ongoing gains in Florida.
- The manufacturing sector is likely to see continued softness in the quarters ahead. This view owes to slower demand for consumer goods amid the ongoing transition in spending toward services and expectations for some weakening in the labor market. With many trading partner countries going through a similar economic cycle to that of the U.S., the export channel will be no panacea for manufacturers this year.
- Despite the many obstacles, we also see several tailwinds for the industry. Pent-up auto demand, rising military spending, reshoring efforts, some improved demand from China's reopening, and large planned investments in electric vehicles and the semiconductor space should help keep a floor on the manufacturing sector as it goes over the latest bump.

Fortunes have shifted abruptly within the manufacturing sector. After two years of battling to keep up with booming goods demand amid supply-chain disruptions, the focus over the past few months has turned to fading consumption, production, and rising stockpiles in certain pockets of the industry. This downcycle in both production and demand looks set to continue over the next several quarters, as the impact of past interest rate increases continue to bear down. Still, we see a number of offsetting tailwinds, including some pent-up demand for autos and large investments in electric vehicles (EVs) and the semiconductor space. The industry should also benefit from efforts to bring production closer to the American consumers (i.e., reshoring). These elements will help provide some support to manufacturing as it goes through a period of adjustment.

The Tide Is Turning

Manufacturing production fell steeply in November and December, ending 2022 below the year-ago level (Chart 1). This is a clear signal that the industry is already in recession. Similar red flags have been echoed in the softer sentiment data, notably the ISM manufacturing report, where the headline index has dropped well into contractionary territory for the first time since the onset of the pandemic. According to the same ISM report, manufacturing customers' inventories have come up from very low levels recently, with the corresponding subindex now above both its pre-pandemic level and historical average. Instead, manufacturers' inventories continue to expand, but at a notably slower pace compared to mid-2022. This as the backlog of or-

Chart 1: Manufacturing Production is Pulling Back



Source: Federal Reserve, TD Economics. *As per SIC.

Chart 2: Delivery Lead Times Have Improved Drastically

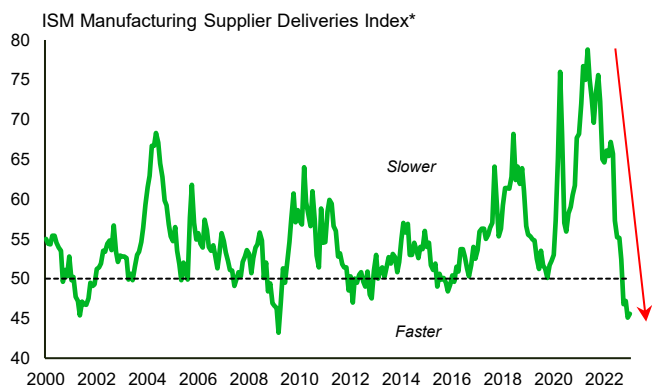
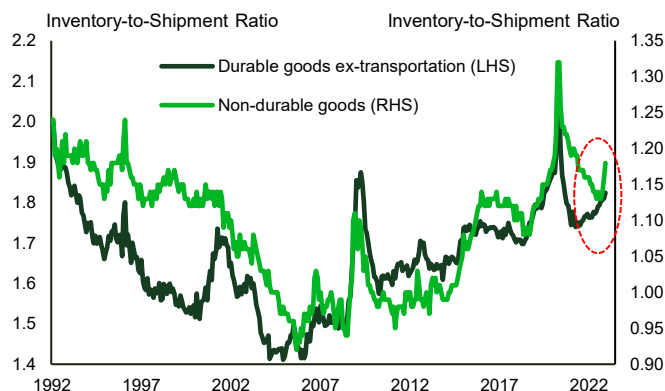


Chart 3: Manufacturers' Inventory-to-Shipment Ratios Are on the Rise



ders and supplier lead times have retreated sharply, with the latter recently hovering near 2009 lows (Chart 2). Complementing this picture is data from the Census Bureau, which shows that the inventory-to-shipment ratio among manufacturers has also been trending up. Excluding the weighty transportation sector, which continues to grapple with the auto shortage, the ratio is not far off from its pre-pandemic level (Chart 3). Signs of rising stockpiles are more evident in certain pockets of the industry, such as textiles, apparel, leather & applied products in non-durable goods, along with furniture & related products in durable goods, with the inventory-to-shipment ratio in these sectors particularly elevated relative to historical norms.

Job growth trends tend to lag, but even here we're noticing a slowdown. Manufacturing job growth lost steam over the past year, with gains easing from a pace of around 3.2% (month-on-month annualized) in late summer 2022 to 1.4% more recently. In general, sectors that have recorded notable increases in their inventory-to-sales ra-

tio have also experienced weak job growth. For example, sectors such as textile mills, paper & paper products, petroleum & coal, plastics & rubber, which fall under non-durable goods, have recorded job losses in recent months (Table 1).

Hiring in durable goods manufacturing has generally held up better, thanks in part to still-decent gains in areas such as machinery and transportation equipment (Chart 4). One notable exception to the trend within durable goods manufacturing is the "furniture & related products" category. Helped along by the surge in housing activity, the sector recorded a sharp rebound soon after the onset of the pandemic, with payrolls matching their pre-pandemic level several months ahead of the rest of industry as a whole. However, over the past year, the sector has echoed the turn in housing momentum by shedding jobs in eight of the last ten months. The tough environment for furniture manufacturers is also visible in the sector's capacity utilization rate, which has fallen several points below its pre-pandemic level.

Another important indicator that plays into the manufacturing weakness theme is overtime hours-worked. With

Table 1: U.S. Manufacturing Job Growth

3-Month % Change Annualized	Aug 22	Jan 23
Manufacturing total	3.2	1.4
Durable goods	3.8	2.2
Wood products	-0.6	2.7
Nonmetallic mineral products	5.6	10.3
Primary metals	3.5	-2.6
Fabricated metal products	2.4	1.8
Machinery	2.9	4.2
Computer and electronic products	3.9	1.0
Electrical equipment and appliances	1.4	1.1
Transportation equipment	8.7	3.3
Autos	9.5	3.2
Furniture and related products	-2.6	-7.9
Miscellaneous durable goods	3.4	2.0
Non-durable goods	2.2	0.2
Food	1.1	4.4
Textile mills	-2.4	-0.4
Textile product mills	-7.4	3.6
Apparel	0.0	6.6
Wood products	-0.6	2.7
Paper and paper products	-2.0	-2.8
Printing and related activities	1.8	0.9
Petroleum and coal products	-7.3	-4.1
Chemicals	4.9	-2.1
Plastics and rubber products	4.7	-6.0
Miscellaneous nondurable goods	9.0	0.4

Source: BLS, TD Economics.

Chart 4: Hiring Pace in Manufacturing Industry Loses Steam

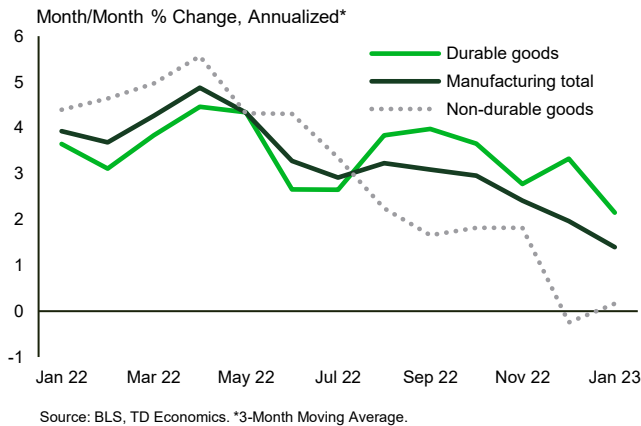
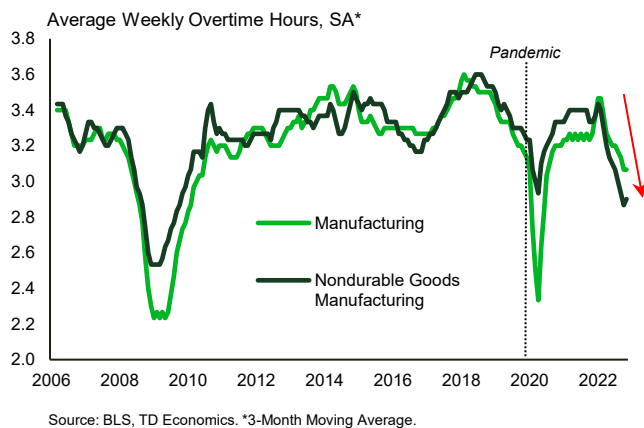


Chart 5: Overtime Hours in Manufacturing Have Pulled Back Quickly



demand falling and supply chain disruptions abating, overtime hours among manufacturing employees have pulled back quickly, especially in non-durable goods manufacturing (Chart 5). Such sharp declines are unusual and consistent with downturns in the sector.

East Coast Manufacturing Job Growth Lags, But Lower South Atlantic Is Holding Up Better

Taking a closer look at regional trends with the eastern seaboard in focus shows that the slowdown in manufacturing job growth has generally been more pronounced for the East Coast region compared to the rest of the country (Chart 6). Outside of this footprint, states with an above-average manufacturing presence where sectoral job growth continued to trend strongly at the end of last year included Kansas, South Dakota, Texas, Oregon, Nebraska, Alabama, and Kentucky, among others (note that state-level data extends only to December 2022). Across the East Coast, the Middle-Atlantic region and Lower South Atlantic have

held their own recently (Chart 6). However, most states in the Upper South Atlantic region shed manufacturing jobs at the end of last year. New England's print is disappointing too, but the weakness here has been concentrated in the large state of Massachusetts.

Part of the differences across regions can be explained by the fact that some states have more to do to recover jobs lost earlier in the pandemic – an element that has likely helped keep their manufacturing job engines humming over the last little while. Case in point is the Mid-Atlantic region, where sectoral payrolls are still down 1.8% from February 2020 – a much weaker showing than nationally (+1.7%).

The strength in the Lower South Atlantic, meanwhile, has been spearheaded by strong gains in Florida. The Sunshine State has continued to add manufacturing jobs at a pace more than twice that of the nation, despite having pushed well past its pre-pandemic level (+9%). South Carolina and Georgia have also recorded respectable post-pandemic performances, although the hiring pace in the latter dipped into negative territory at the end of 2022. Zooming out the lens, the manufacturing revival of the Lower South Atlantic is remarkable even from a long-term perspective. The subregion has essentially clawed its way back near the mid-2000s peak in manufacturing employment, while the rest of the East Coast region combined is still down over 20% from this level (Chart 7).

As a rule of thumb, the more exposed a state is to the manufacturing industry, the greater the potential economic setback as this sector goes over the latest hurdle. From this perspective, concerns along the East Coast would center with the Carolinas, New Hampshire, and Connecticut, which are among the most exposed states in the region (Table 2). That

Chart 6: Pace of Manufacturing Job Growth has Cooled

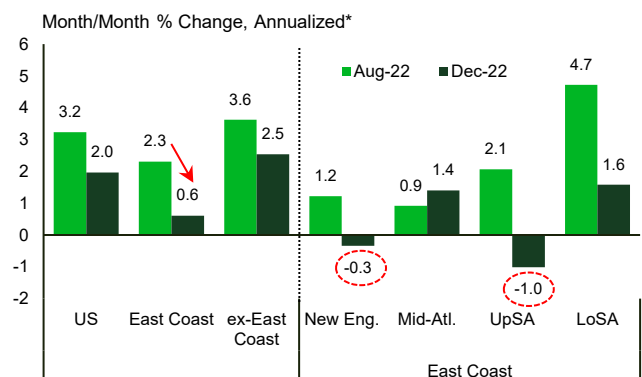
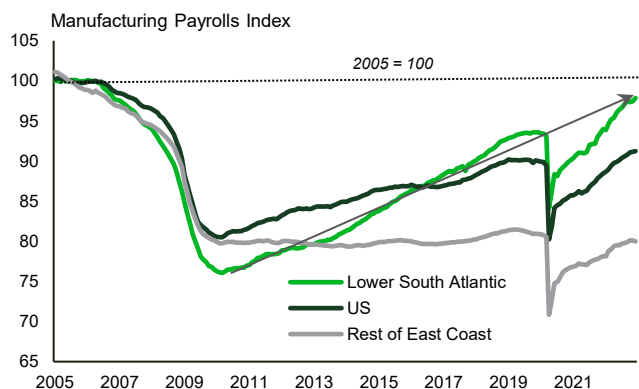


Table 2: Exposure to Manufacturing Industry

% Share of State Total	US	New England						Middle Atlantic			Upper South Atlantic					Lower South Atlantic		
		CT	MA	ME	NH	RI	VT	NJ	NY	PA	DE	MD	NC	VA	WV	FL	GA	SC
Employment*	8.4	9.6	6.5	8.6	10.1	8.1	9.7	5.8	4.4	9.4	5.7	4.1	9.9	5.9	6.6	4.4	8.6	11.6
Real GDP*	11.3	12.3	9.2	10.1	11.7	8.4	9.6	8.9	4.1	12.3	7.7	6.2	15.2	8.2	9.7	5.3	9.6	15.3

Source: BLS, BEA, TD Economics. *Q3-2022 data used for comparability purposes.

Chart 7: Lower South Atlantic Manufacturing Revival


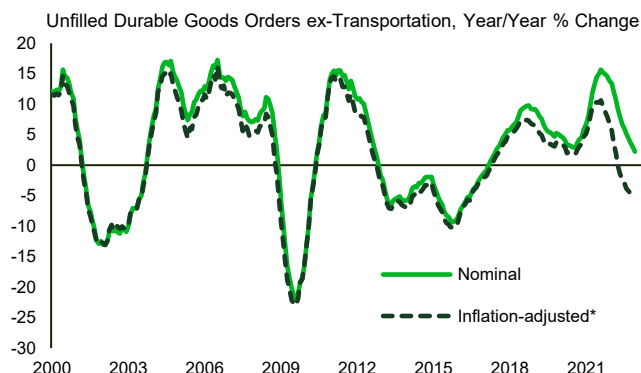
Source: TD Economics.

said, headline exposures are only a starting point. To get an accurate read on potential impacts, the composition of each state's manufacturing industry must also be carefully considered. In this vein, South Carolina's large exposure to auto production, which – as we explain later in this note – has some more growth in the tank, is likely to blunt the negative impact for the Palmetto State. Similarly, Connecticut's heavy tilt toward defense-related products, where demand remains strong, should provide considerable support.

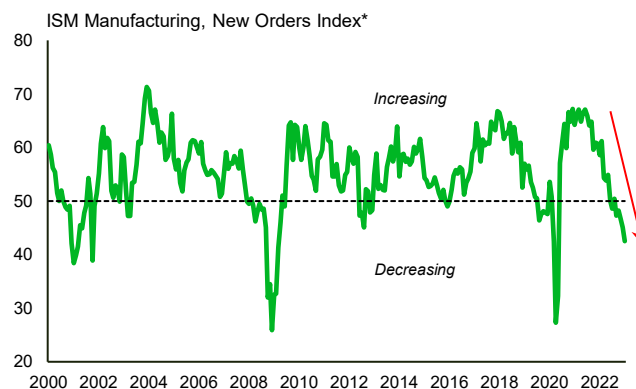
Further Weakness in the Cards for U.S. Manufacturing

The manufacturing sector is likely to see continued softness ahead. While some indicators, such as new goods orders, may appear to be at odds with this narrative, a closer inspection tells a different story. Total goods orders stood near all-time highs in nominal terms in December. Non-durable goods orders, however, accounting for roughly half of the total, peaked in June 2022 and are down over 5% from that level. Durable goods orders appear to be doing much better at first glance, surging 5.6% month-on-month in December. This latest increase, however, can largely be explained by a surge in transportation equipment, with nondefense aircraft orders up a staggering 115% on the month. Aircraft orders tend to be volatile. Stripping away transportation equipment, core durable goods orders declined in December (-0.2%), extending a mild downtrend

that goes as far back as August. Tilting to “unfilled” durable goods orders, these also look much weaker when stripping away transportation equipment, having essentially flatlined since the end of summer. What's more, the nominal series is propped up by strong price growth. Adjusting for inflation using the Producer Price Index (PPI) reveals an even weaker backdrop, with unfilled orders down steeply in year-over-year terms (Chart 8). Survey-level data is also not very encouraging, with new orders in the ISM survey falling deeper into contractionary territory in recent months (Chart 9). This weakness is echoed across regional surveys, such as those from the Richmond and New York

Chart 8: Inflation-Adjusted Backlog of Orders Has Dwindled


Source: Census Bureau, TD Economics.
*Adjusted using Private Capital Equipment from PPI.

Chart 9: New Orders ISM Manufacturing Index Falls Deeper Into Contractionary Territory


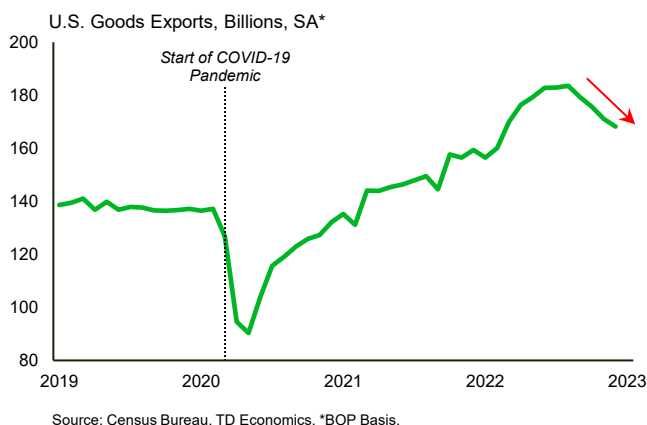
Source: ISM, TD Economics. *SA; values above 50 indicate slower deliveries.

Fed, with new manufacturing orders in the latter looking particularly weak at the start of this year.

Looking beyond near-term indicators, from a macro-economic perspective, the pillars underpinning a slow-down in the industry have to do with slower demand for consumer goods. Consumers filled up on goods during the pandemic, and with the economy no longer chained by COVID restrictions for some time now, preferences and spending patterns continue to tilt toward services. A softening labor market will likely add to the challenges for manufacturers. We project the national unemployment rate will trek higher in the quarters ahead, a trend that will further weigh on goods spending.

The factors weighing on 'goods' consumption are not unique to the United States. A similar theme applies to many advanced-economy peers, where growth is poised to soften in response to last year's sharp increase in interest rates (see our Global forecast [here](#)). In turn, export opportunities will be limited. Total U.S. goods exports have already fallen 8% in nominal terms from mid-2022 levels (Chart 10). China's reopening, however, does hold some promise. The Asian giant has received close to 8% of total U.S. goods exports over the last few quarters. This is smaller than the 17% for the European Union, where we expect growth to stall this year, but is still substantial. As growth in China rebounds from 2.9% in 2022 to an expected pace of over 5% this year, it should require the importing of more goods from the U.S., so long as political relations don't deviate much from their current standing. Putting all the pieces together, the key message is that as domestic demand weakens, the export channel will be no panacea, offering limited support to U.S. manufacturers.

Chart 10: U.S. Goods Exports Down 8% from August 2022 Peak

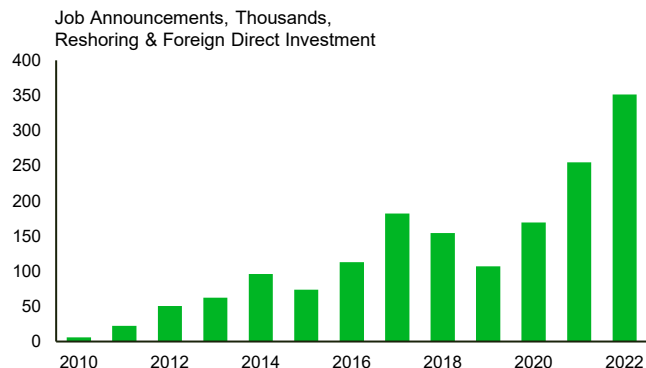


Important Mitigating Factors

While near-term risks are skewed to the downside, there are also plenty of tailwinds that should lend a hand to the manufacturing as it goes over the latest bump.

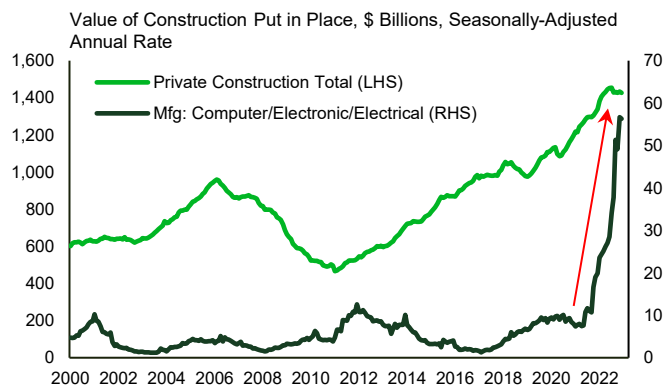
- Pent-up Auto demand:** Demand for many previously-hot consumer items is indeed subsiding, but one major category that stands out as having some more growth in the tank is autos. This is the result of auto sales undershooting the 16.5-17 million trend in each of the last three years, leading to considerable pent-up demand – a boon for auto manufacturing. We believe that easing supply constraints should allow for auto production to normalize to pre-pandemic levels by the second half of this year, a factor that will bring more affordable supply to market. In turn, the improved inventory mix should help nudge up auto sales to 14.5-15 million this year from 13.7 million last year. Elevated financing costs will keep a ceiling on demand but shouldn't restrict sales from moving higher. That said, the potential for the economic backdrop to worsen more than we currently anticipate – a factor that would further boost auto loan delinquencies, which are already trending up from low levels – remains a downside risk.
- Military buildup:** The Russia-Ukraine war and longer-term concerns regarding a potential conflict with China are leading to an increase in military spending – a boon for U.S. defense manufacturers. The fact that the Pentagon plans to boost the production of artillery shells sixfold within two years, is one striking example that helps highlight this theme. Increased demand for weapons, including those of the high value-added kind (i.e., military jets, helicopters etc.), from our NATO partners and other eligible foreign purchasers is an added tailwind.
- Made in America/Reshoring:** The pandemic wreaked havoc on supply chains, raising awareness for the need to diversify them and to bring some production back home closer to the end consumer. In this vein, the positive reshoring trend that has been observed over the last few years, appears to have more room to run (Chart 11). Making products in America comes with benefits for producers, such as saving on transportation costs and customs duties, along with taking advantage of targeted government subsidies. To be able to achieve competitive production costs, reshoring will likely need to be heavily paired with efficiency-improving technological investments. These will be an

Chart 11: Reshoring Has Been On the Upswing in Recent Years



*2022 is estimate; two thirds made up by reshoring and one third by FDI.
Source: Reshoring Initiative, TD Economics.

Chart 12: Computer/Electronic/Electrical Construction Has Shot Higher Since Late-2021



Source: Census Bureau, TD Economics.

added boon for the economy, with the second-order effects extending to things like the need for higher-skilled (and often better-paid) labor.

- **Massive long-term investments:** There are some massive investments in the pipeline for U.S. manufacturing, thanks in part to substantial government support measures. For instance, the auto industry is entering a factory-building boom, with investments driven by the shift to electric vehicles (EVs) and accompanying government subsidies. According to the Center for Automotive Research, \$33 billion in investments in auto-factory and battery-making facilities were pledged in the U.S. between January and November 2022. This was on top of the \$37 billion in new auto-factory spending committed in the year prior. Supporting the trend is the Inflation Reduction Act, which not only provides incentives for manufacturers to retool existing factories and build new ones, but also for buyers to choose EVs

as it provides up to \$7,500 for EVs assembled in North America. Further complementing these efforts is the Bipartisan Infrastructure Law, which will help build out the nation's EV charging network. The semiconductor space is another good-news story. The renewed focus on semiconductors as per the global shortage experienced during the pandemic has led to a sharp increase in domestic microchip plant construction (Chart 12). Government measures should lend additional support in the years ahead. The CHIPS and Science Act will provide \$53 billion over five years to expand semiconductor and manufacturing capacity as well as provide a 25% tax credit for new and expanded chip manufacturing facilities. Many of these large investments lie on the eastern seaboard (i.e., Micron semiconductor facility in upstate New York, \$100 billion and Wolfspeed in North Carolina, \$5 billion; EV facilities in states like Georgia, North Carolina etc.) and will help boost the region's economy over the long-term.

Bottom Line

The manufacturing sector was a key beneficiary of the strong demand for consumer goods soon after the onset of the pandemic, recording a strong run over 2021 and much of last year. However, the tide has been turning over the last few months. Plenty of indicators point to weakening conditions, bolstering the case that the sector may already be in recession. Among other things, manufacturing job growth, a lagging but important indicator, has lost considerable steam in recent months – a trend that has been somewhat more pronounced in parts of the East Coast region.

Slower demand for consumer goods – owing to the ongoing transition in spending toward services and expectations for some weakening in the labor market – remains a key headwind for the industry in the quarters ahead. And with many trading partner countries going through a similar economic cycle to that of the U.S. – China being a notable outlier to this trend – the export channel will be no panacea for manufacturers. Still, several tailwinds – i.e., pent-up auto demand, rising military spending, reshoring efforts, along with large planned investments in the EV and semiconductor space – are poised to lend a hand, keeping a floor on the manufacturing sector as it goes over the latest bump.

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